



Healthcare Analytics in Navy Medicine

Perspectives and Methods for Decision-Making

FOCUS ON DENTAL CARE

Oral Health: A Key Component of Overall Health and Readiness

Joseph Carey, DMD, LT, DC USN and Chad Martin, DDS, Col, DC USAF

Good oral health and hygiene are critical components of troop readiness and well-being. Dental problems can impact a Sailor or Marine's ability to deploy or carry out day-to-day work and therefore have a huge impact on mission readiness. Moreover, oral health status often provides a picture of overall health status. For these reasons, the provision of dental care to address active oral disease quickly and regular access to preventative dental check-ups are key priorities of Navy Medicine. This article describes the programs that provide the delivery of oral healthcare and the associated information systems.

In addition to regular medical care, the provision of dental care to active duty service members (ADSMs) is provided at many Navy medical facilities, dental clinics, ships, and on the battlefield. Untreated oral disease and disorders can result in pain, discomfort, and other health issues that affect a Sailor or Marine's ability to effectively carry out their work assignments, as well as the number of individuals who are eligible for deployment. Additionally, poor oral health may affect, be affected by, or contribute to various diseases and conditions, including: endocarditis, cardiovascular disease, premature birth, low birth weight, diabetes, and many other chronic health conditions.

Troop Dental Care and Readiness

The Navy's dental care providers and resources address active dental disease and ensure that the Navy's Oral Disease Risk Management Protocol is followed. This protocol standardizes the management of dental caries, periodontal disease, and oral cancer, and, it directs the appropriate treatment and education based on level of

risk. As part of this protocol, Sailors and Marines are required to have yearly exams and cleanings during which they are educated in oral hygiene, nutrition, and tobacco counseling. The goal is to maintain good oral health and ensure ADSMs sustain Dental Class 1 and Class 2 (no dental emergencies expected within a year), which is the standard required for deployment readiness.

There are varied levels of dental capabilities at each dental facility and base. Generally, continental United States (CONUS) dental clinics provide dental services to active duty personnel only. For those ADSMs who are unable to receive required care from a military dental treatment facility (DTF), a TRICARE contract has been established with United Concordia Companies, Inc. (UCCI) to administer the Active Duty Dental Program (ADDP). The ADDP provides private sector dental care to ensure dental health and deployment readiness for ADSMs. The ADDP allows DTFs to refer ADSM dental care to the UCCI network of dentists when the specialty care required is not available at the DTF or to maintain the access to care standards of a routine care appointment within 21 days and a specialty care appointment within 28 days. Additionally, service members on continuous active duty orders for more than 30 consecutive days who work and live more than 50 miles from a military DTF are designated as "Remote," and they receive their dental care via UCCI's network of dentists. For more information on the ADDP, visit the ADDP website at <http://www.tricare.mil/Dental/ADDental.aspx>.

Other TRICARE Dental Contracts

Family members, retirees, and other Navy Medicine beneficiaries also rely on regular dental care to maintain oral health. Many DTFs do not treat non-active duty

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beneficiaries, and these beneficiaries rely on private sector dental care to meet their oral health needs. The TRICARE Dental Program (TDP) is a voluntary program for family members and the Reserve Component. It currently covers over two million individuals. TDP is a very comprehensive program that provides for a wide range of dental benefits, and cost of the premiums is shared, with the government paying 60 percent and the enrollee paying 40 percent. The current monthly premiums are \$10.66 for a single enrollment and \$31.96 for a family enrollment. Enhancements under the current TDP contract are an increase for the annual maximum benefit per enrollee to \$1,300 and an increase in the lifetime maximum for orthodontics to \$1,750. Also, a third dental cleaning during a 12-month time period is now covered for pregnant enrollees, and there are no beneficiary cost shares for scaling and root planing for diabetic enrollees. For more information on the TDP benefits, visit the TDP website at <http://www.tricare.mil/Dental/TDP.aspx>.

Additionally, the TRICARE Retiree Dental Plan (TRDP) is a voluntary program for retirees, family members of retirees, Medal of Honor recipients and survivors. It covers 1.34 million individuals. TRDP is also a very comprehensive program that provides a wide range of dental benefits and 100 percent of the premiums are paid by the enrollee. This is the largest dental group plan in the United States where 100 percent of the premiums are paid by the enrollees. For more information on the TRDP benefits visit the TRDP website at <http://www.tricare.mil/Dental/TRDP.aspx>.

Tracking Navy Dental Care and Readiness

The Dental Common Access System (DENCAS) is the Navy's current database for tracking dental readiness. DENCAS exists in two platforms: DENCAS Web and DENCAS Remote. DENCAS Web is a real-time database that is accessible to Navy dental personnel around the world. DENCAS Web allows two types of users. Command-level users can view data from their DTFs, while Corporate-level users can view data Navy-wide or drill down to an individual dental command or clinic. Shore commands use DENCAS Web as the primary means of data entry and processing. DENCAS Remote is designed to be used by commands with a limited internet connection, such as deployed ships and Marine units. When a command using DENCAS Remote establishes an internet connection after deployment, it then uploads

its data collected to DENCAS Web, which feeds into a centralized database.

DENCAS is used by dental clinics for scheduling, patient readiness, tracking patient needs, and provider production. It does not archive images such as digital radiographs (e.g., x-rays). This is one of the many reasons why the Navy will be transitioning to the Corporate Dental Application (CDA) in the near future. The Army and Air Force already use CDA as their scheduling and reporting database. CDA is a web-based system that feeds into the centralized Corporate Dental System (CDS). A remote version of CDA for deployed Navy units is being developed. Walter Reed National Military Medical Center (WRNMMC) in Bethesda, MD is currently the Navy's test facility for CDA. CDA will be released to Navy clinics over the next few years, and DENCAS will eventually be phased out once the deployment of CDA is completed.

CDA has several advantages over DENCAS. First, unlike DENCAS, CDA has the ability to link to stored digital images. For example, Army digital images are fed into a separate central database using its Digital Enterprise Viewing and Acquisition Application (DEVAA). CDA then links to those images for retrieval. Second, CDA requires the provider to tie his/her production to the patient that received the treatment. This is helpful because it gives administrators the ability to track what procedures a patient receives. DENCAS also has this capability, but its use is not required. Third, CDA also has a direct feed into the Military Health System (MHS) Data Repository (MDR), which feeds into MHS MART(M2). M2 can be used to manage and oversee MHS operations worldwide and link dental care data with other healthcare utilization data and beneficiary information. Without a direct feed to M2, the number of patients treated in Navy DTFs and dental production at a patient-level cannot be accurately reported or compared to other Services.

The shift from DENCAS to CDA will be an important step forward in increasing the analytic possibilities for Navy dental care. Understanding what we do, whom we serve, and how well we provide care will aide our dental providers in improving the necessary treatment and care of our Sailors and Marines (and their families) at home, at sea, and in theater. This will ensure our continued ability to maintain a medically fit and ready force.

LT Carey is an analyst in the Dental Services (M3B2) division of the Bureau of Navy Medicine. Col Martin is the Chief of the Dental Care Branch of the TRICARE Management Activity.



SKILLS AND METHODS

—UNDERSTANDING DENTAL DATA AND CODING

A wealth of dental data is readily available in M2 that enables analysts to assess dental readiness status, determine how much workload individual providers or clinics are performing, and perform studies centered on resourcing, productivity, and risk adjustment. This article briefly describes some of the unique aspects of these data including the dental procedure coding system, dental weighted values, and how to obtain dental provider FTEs from M2.

Current Dental Terminology (CDT)

MHS analysts that do not have any background working with dental data might be hesitant to perform new studies on this large and important segment of the MHS. While it is true that dentistry has its own complex features and terminology, there is much overlap between how dental analyses and comparable medical studies are performed.

The first step to understanding the language of dentistry is to get familiar with the how dental care is coded in administrative data records. Like medical encounter records, there is great detail about dental services and procedures performed during dental encounters; however, diagnosis information is not currently captured in dental encounter records. Any MHS healthcare analyst already familiar with performing analyses that utilize CPT or HCPCS procedure codes will find it fairly intuitive to transition their knowledge and experience to Current Dental Terminology (CDT), the standard code set used to report dental services and procedures. Prior to 2010, CDT codes were published by the Centers for Medicare and Medicaid Services (CMS) as HCPCS “D-codes” under an arrangement with the American Dental Association (ADA). Today, the ADA publishes this dental code set in a separate publication that establishes the billing codes for dental procedures and supplies.

At a summary level, dental procedure codes are grouped into major sections within the following CDT ranges:

D0100-D0999: Diagnostic (ex. oral evaluations)
D1000-D1999: Preventive (ex. prophylaxis)
D2000-D2999: Restorative (ex. fillings, crowns)
D3000-D3999: Endodontics (ex. root canals)
D4000-D4999: Periodontics (ex. gingivectomies)
D5000-D5899: Prosthodontics (ex. dentures)
D5900-D5999: Maxillofacial Prosthetics

D6000-D6199: Implant Services

D6200-D6999: Fixed Prosthodontics

D7000-D7999: Oral Surgery (ex. extractions)

D8000-D8999: Orthodontics (ex. braces)

D9000-D9999: Adjunctive Services (ex. anesthesia)

Dental Weighted Values (DWV)

One of the most important workload measures unique to dental data is the Dental Weighted Value (DWV). DWVs are assigned at a CDT level of detail (i.e., each CDT has a DWV value). For example, one of the higher volume and total cost dental procedures found in the M2 dental encounter files is CDT D3330, which represents a molar root canal (Figure 1).

Figure 1. Molar root canal record

CDT	Description, Long	Dental Weighted Value
D3330	ENDODONTIC THERAPY, MOLAR	11.60

This single tooth procedure alone is intensive enough to obtain 11.60 DWVs. But what exactly do DWVs (as reported in M2) represent? The DoD developed this measure in 1997 based on the 95 percent level of the National Average ADA fee survey and other regional fee schedules. A DoD Tri-Service Work Group continues to review and revise procedure codes and DWVs every two years, coinciding with the ADA’s release of CDTs. A significant difference of this measure from other workload measures like Relative Value Units (RVU) is that its methodology incorporates a relative cost basis of \$100. For example, D0120 (Periodic Dental Evaluation), has an assigned DWV of 0.48. Therefore, the relative cost for this code is \$48.00. An important use of this type of cost-based value unit is its ability to compare the cost of services provided by DTF dentists with the costs of contracted care.

To appropriately use DWVs to measure the productivity of a given dental clinic, other factors should be taken into account. For example, there may be significant differences between clinics in the overall ability to contract dentists, hygienists, and dental assistants due to remote geographic constraints. Other clinics may be overstaffed and still only output slightly more DWVs than optimally staffed clinics. Therefore, a better measurement of productivity would be a ratio of DWVs per full-time equivalents (FTE) of dental providers by month. Fortunately, M2 provides quick access to this FTE staffing data as well.



MEPRS Dental FTE

The Medical Expense & Performance Reporting System (MEPRS) is the cost accounting system for the MHS, containing Tri-Service financial, personnel, and workload data from reporting medical and dental treatment facilities worldwide. Within M2, there are two separate MEPRS files: the ‘MEPRS’ file, which contains information on expenses, workload and staff; and the ‘MEPRS Personnel Detail’ file, which contains only staffing data with more dimensions available. Both files are at a summary level of detail where each record represents data reported by an MTF or DTF for a given month and “work center” (e.g., clinic, or MEPRS 4 Code). MEPRS Codes that start with the letter ‘C’ specifically identify dental care services. DWVs are not currently available in the M2 MEPRS files but will be added in a later release.

The MEPRS tables contain minimal data elements; however, those that they do have are very helpful. Available FTEs and Assigned FTEs are two commonly used measures that can be quickly stratified by Occupational Codes and Skill Types. Some of the dental related values for Occupation Codes include:

- Comprehensive Dentist
- Dental Assistant
- Dental Hygienist
- Dental Laboratory Technician
- Dental Officer
- Endodontist
- Orthodontist
- Periodontist
- Prosthodontist

With these occupational codes and skill types, it is fairly intuitive for an analyst to quickly answer questions such as, “What type of dental staff is available across all Navy DTFs?” or “What is the monthly FTE trend for dental hygienists at the Branch Health Clinic Parris Island?”

DATA AND INFORMATION SYSTEMS

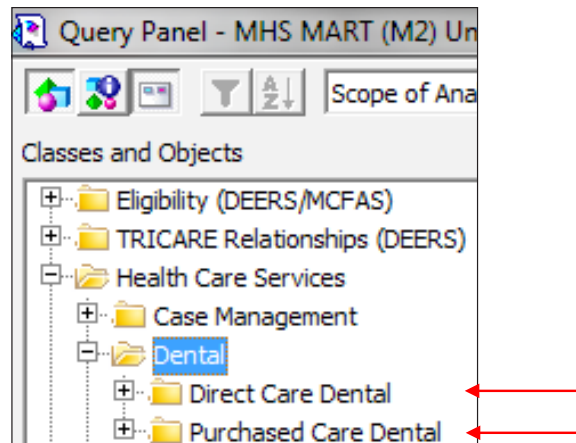
—DENTAL CARE FILES IN M2

M2 is the only data mart that provides analysts the ability to quickly query both direct and purchased care dental workload data at the patient, encounter, and claim level of detail for both micro and macro level analyses. This article describes the major dental files available in M2 with some helpful tips on how the data are organized.

Dental Class Location

The dental data types are very easy to find in M2. From the M2 Query Panel, simply navigate to the Health Care Services / Dental folder and you will find subfolders for each of the Direct Care Dental and Purchased Care Dental data types (Figure 2).

Figure 2. Dental class location



Purchased Care Dental

The Purchased Care Dental table in M2 currently contains data for the Active Duty Dental Program (ADDP) and the TRICARE Dental Program (TDP). Two other sources of purchased care dental data that will be added to this table in the near future include the TRICARE Retiree Dental Program (TRDP) and the legacy Military Medical Support Office (MMSO) Supplemental Care Program.

Since all of the various purchased care programs are included within this same table, it is important for analysts to know how to differentiate which claims come from the different programs. The field that is primarily used to create results by program is the “Source of Claim” field. By adding this object to the results window, M2 will automatically categorize your results by dental program (Figure 3).

Figure 3. Sample purchased care dental results in M2

FY	Source of Claim	Number of Line Items	Amount Billed
2010	ADDP	967,185	\$205,680,852
2010	TDP	8,421,176	\$890,507,249
2011	ADDP	1,017,945	\$219,488,194
2011	TDP	8,833,910	\$952,401,604
2012	ADDP	964,945	\$200,455,915
2012	TDP	9,067,432	\$1,597,507,143
2013	ADDP	365,984	\$75,717,111
2013	TDP	4,434,923	\$1,295,282,461



The ADDP program has two main parts, Remote ADDP and DTF Referred, that are also often separated based on the context of the question being asked. There is a field called “DTF Referral Indicator” that is a Y/N flag that is only populated on ADDP claims and provides an easy way to differentiate the two parts of the ADDP data. For DTF Referred claims, the Referring DTF DMIS ID field is also available.

Some of the other main fields in this table that will likely be useful for most purchased care dental analyses are: DWVs, Dental Readiness Classification (ADDP only), Record ID (i.e., Claim Number), Line Number, Tooth Code, Service Dates, billing and payment amounts, and many of the other fields you would commonly find on many M2 data types, including patient demographics, provider information, and geographic concepts.

Direct Care Dental

The Direct Care Dental table in M2 currently contains data that is received directly from the Corporate Dental Application (CDA). This application is the platform used by Army and Air Force DTFs to capture all dental workload, scheduling, readiness, and digital imaging. The Navy currently uses DENCAS, but is planning to move to the CDA in the future. DENCAS does not capture data at the level of detail (procedure level) to support inclusion into the M2 Direct Care Dental table. Once the Navy dental workload is captured in the CDA, all of military dentistry will have data available for analysis using M2.

There are many similarities between the structure and available data fields in the Direct Care Dental table and the Purchased Care Dental table. Like the purchased care table, each record is essentially at a procedure (CDT) level of detail. However, it is important for the analyst to recognize that the direct care data records are describing encounters. There are also procedure codes in the direct care data that are unique to the military. One of the most important is A0199, the code used to collect “emergency” encounters. According to *The DoD Guidelines for Dental Procedure Codes and Dental Weighted Values*, when using this code providers are to take credit only once per each unscheduled visit to a dental facility, regardless of the reason for which the patient sought expedited care.

Dental Treatment Facility (DTF)

Most M2 users are well acquainted with utilizing various forms of DMIS ID fields to identify military hospitals, clinics, and catchment areas. The DMIS ID fields found

in the dental data types are used in a similar fashion but with some slight nuances that are important to consider. The primary way to identify Dental Treatment Facilities (DTFs) in M2 is through the Treatment DMIS ID field (in Direct Care) and the Referring DMIS ID field (in Purchased Care). However, the CDA does not utilize the same DMIS ID values used in other M2 data files. Instead, the CDA has its own DTF identifier field which does not always map to the exact DMIS ID values in M2. This raw DTF identifier field is sent to M2 and is made available on the Direct Care Dental table in the field called “CDA Site Identifier”. Analysts or CDA users who are more familiar with the CDA Identifiers may prefer to use that field instead of DMIS IDs to identify DTFs.

In the CDA, there are also many deployed DTFs capturing their workload performed in Iraq (through FY11) and Afghanistan, which do not have an assigned DMIS ID. For those CDA Site Identifiers, the value in the Treatment DMIS ID field will be “LINE”. This data can be extremely useful at command levels to objectively establish provider, dental ancillary, and dental equipment requirements for a deployed patient population based on patient needs and potential risk.

Upcoming Enhancements

There are several future enhancements being made to the M2 dental data that are currently underway. The first involves the development of a dental readiness file that will combine all available data from both the direct and purchased care dental data to make it much easier for users to identify the current readiness status for all active duty service members in a single file. The second enhancement involves the addition of two more sources of purchased care dental data including the TRICARE Retiree Dental Program (TRDP) and historical data from the Military Medical Support Office (MMSO).

NEW KNOWLEDGE

—NOTED PUBLICATIONS

The following report details the drivers of oral health quality improvement initiatives and summarizes recent quality improvement activities in the oral healthcare delivery system.

Oral Health Quality Improvement in the Era of Accountability

Glassman, Paul. W.K. Kellogg Foundation, December 2011.



This W.K. Kellogg Foundation report outlines the challenges of oral healthcare in the current transitional era from fee-for-service to value-centered healthcare. Like general healthcare, oral health faces cost increases that surpass the Consumer Price Index. In fact, the report highlights that oral health spending is projected to increase between 2000 and 2020 by 271 percent, or from \$62.0 billion to \$167.9 billion. The second challenge reflects the unwarranted variability produced by the oral health system, as well as the evidence of profound health disparities that still exist in the population despite scientific advances in care. The author reviews the current status and trends in quality measurement and improvement, describes efforts underway to expand and enhance these efforts, and depicts specific opportunities of improvement.

The implementation of value-based care has additional challenges in oral healthcare. First, oral healthcare faces greater access to care issues and variability in outcomes, especially among minority groups and those in lower income levels. Because many people do not carry dental health insurance, oral healthcare is the second largest out-of-pocket health expense (after prescription medication) in the U.S. Second, oral healthcare networks are much more fragmented than other healthcare systems, which makes it more difficult to standardize care across the network, thus perpetuating the current status quo of large variances in quality of care, outcomes, and cost. To add to the fragmentation, unlike most healthcare encounters, oral care is not diagnosis-based, and most providers do not use Electronic Dental Records. Therefore, it is impossible to examine why a procedure was provided or to evaluate whether it was actually needed.

The report points out that the U.S. military is attempting to implement more evaluative oral healthcare, specifically the Air Force, which has been collecting Dental Population Health Metrics (DPHM) during mandated annual or periodic dental examinations of all patients since 1999. While the main goal is to mitigate the “risk” of degradation of oral health, which would either limit an individual’s ability to perform his or her duties or preclude him or her from deployment, the Air Force has successfully reduced caries risk among Air Force personnel enrolled in the risk reduction program. With respect to Veteran care, in 2008, the Office of Dentistry in the Veterans Administration oversaw oral healthcare for 380,000 veterans across 207 dental clinics.

For any health system, oral health is an important component of healthcare. The report concludes that oral

healthcare should be evaluated by meaningful metrics that assess the network in a variety of ways, including access to care, outcomes, cost, and productivity.

The full report can be downloaded at <http://www.wkcf.org/knowledge-center/resources/2012/01/pacific-center-for-special-care-report.aspx>.

WHAT’S COMING UP

—DEFENSE CONNECT ONLINE (DCO) TRAINING OPPORTUNITIES

BUMED PA&E will sponsor a series of monthly DCO presentations on the topic “Populations and Healthcare Systems Performance”. Each webinar will be conducted twice at different times, which will allow OCONUS personnel to participate. Specific dates for these webinars will be announced soon. The first sessions identified for inclusion in this series are:

- Introduction to the Series “Populations and Healthcare Systems Performance”
- Uses of Risk Adjustment Factors
- Defining Cohorts
- Leading and Trailing Indicators
- Variations in Practice Patterns
- Inappropriate Utilization
- Incidence and Prevalence

Members of the group email lists “Healthcare Analytics Community” or “Healthcare Analytics Publication” will receive additional specifics as they become available. To become a member of either or both lists, please send a request to robert.willis@med.navy.mil.

TIPS AND TRICKS

—HISTOGRAMS

While creating many types of charts in Excel can be as simple as clicking a button and using the chart wizard, a histogram – one of the most useful charts for exploratory data analysis – remains more elusive. A histogram is essentially a column chart depicting the number of instances of a data element within a given range of values. This article provides instruction on one approach to create histograms in Excel.

Heavily relied upon in basic statistical analyses, histograms provide an intuitive representation of the statistical

distribution of a data set. Excel does have a tool for constructing histograms as part of the Analysis ToolPak, but the focus of this column is on a more direct approach to creating histograms in Excel. There are two major disadvantages to the Excel histogram function. First, since it is an Add-In and not part of the typical installation, some IT environments may not permit its installation. Second, even when it is able to be used, the histogram tool requires manual updating when the underlying data is changed. This can lead to incorrect reporting when manual updates are not carried out.

There are two major steps in constructing a histogram. First, a frequency table must be created where the boundaries of each range are defined and the number of data points in each range is calculated. Second, a column graph must be generated to represent the frequency table.

To build the frequency table, the ranges (or “bins”) into which the data are to be categorized must be defined. Typically, the bins are of fairly uniform width and will contain a varying number of data points. The number of bins is subject to judgment as there is no wrong answer. A common rule of thumb is to choose a number of bins equal to the square root of the number of observations in the data set.

To construct the frequency table showing the number of observations in each bin, the following steps can be followed (Figure 4):

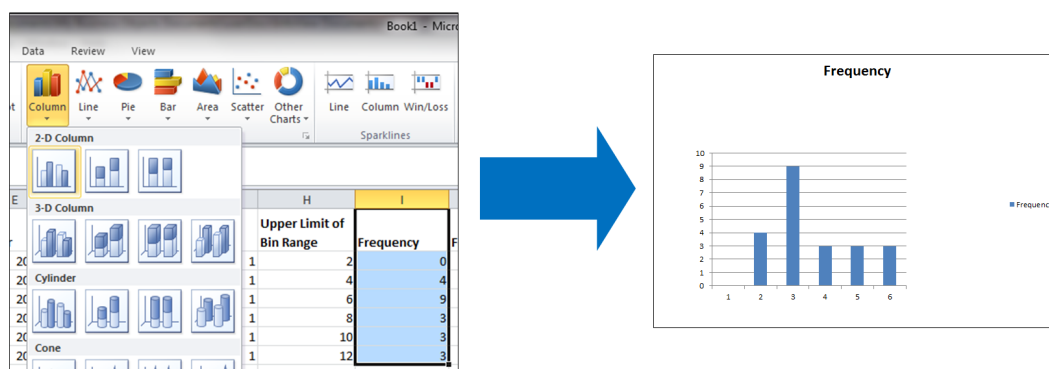
- To the right of the data set, create a column with the upper limits of the bins in ascending order. For the highest bin, use a number that is greater than the largest value in your dataset.
- In the next column to the right, use the COUNTIF function to calculate the number of instances in each bin. Consult an Excel resource to learn the specifics of the COUNTIF function, It is also helpful to add a column with the label by which that bin will be described in the chart (for example, “Less than 2”). For ranges of numbers, add a single apostrophe to indicate to Excel that the text is a text field and not a mathematical function. If the data are already aggregated and include a count of values, then SUMIF may be a more appropriate function.

Once the frequency table has been completed, a chart can be created using Excel’s standard chart tools (see Figure 5). Begin by highlighting just the frequencies, and insert a “2-D Column Chart” – this is on the Insert ribbon and

Figure 4. Example of COUNTIF function for given bin ranges

D	E	F
Upper Limit of Bin Range	Frequency	Formula (to derive Frequency)
2	0	=COUNTIF(B2:B30, "<= 2")
4	4	=COUNTIF(\$B\$2:\$B\$30, ">2")-COUNTIF(\$B\$2:\$B\$30, ">4")
6	9	=COUNTIF(\$B\$2:\$B\$30, ">4")-COUNTIF(\$B\$2:\$B\$30, ">6")
8	3	=COUNTIF(\$B\$2:\$B\$30, ">6")-COUNTIF(\$B\$2:\$B\$30, ">8")
10	3	=COUNTIF(\$B\$2:\$B\$30, ">8")-COUNTIF(\$B\$2:\$B\$30, ">10")
12	3	=COUNTIF(\$B\$2:\$B\$30, ">10")-COUNTIF(\$B\$2:\$B\$30, ">12")

Figure 5. Inserting a chart





is the first type of column chart available from the drop-down menu.

While the initial graph is technically a histogram, several modifications will make it more closely resemble a traditional histogram:

- 1) The legend can be deleted. Since there is only one data series, it is not necessary.
- 2) The horizontal axis labels should be set to the range where the range labels were defined next to the frequency table. This can be done through the “Select Data” dialogue when right-clicking on the chart (Figure 6). Select the “Edit” button in the Select Data Source screen under Horizontal Axis Labels and input the Upper Limit of the Bin Ranges (Figure 7).

Figure 6. Changing the horizontal axis

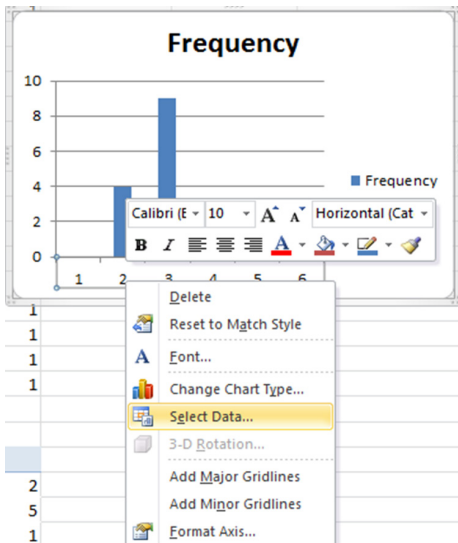
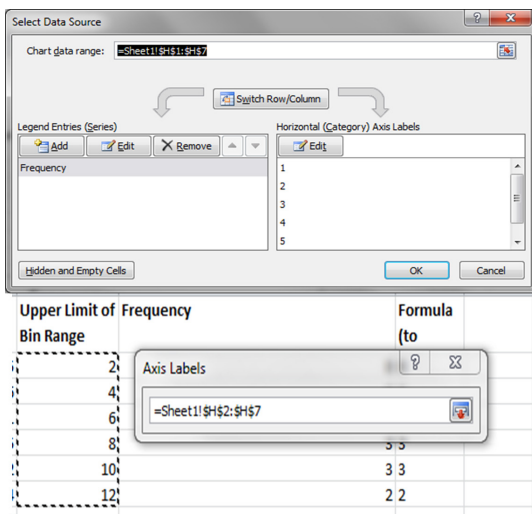
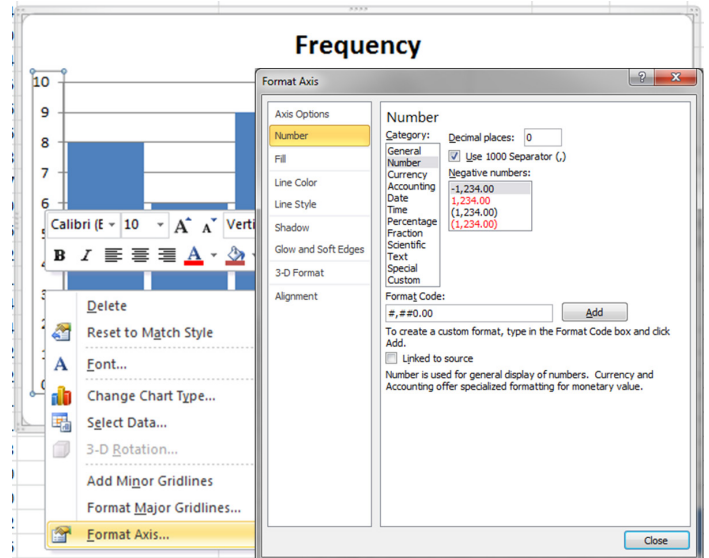


Figure 7. Inputting bin range values in the horizontal axis



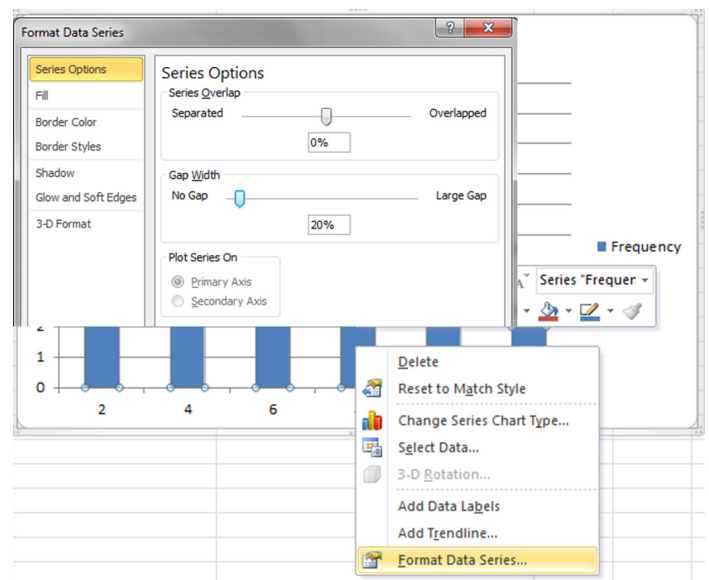
- 3) The vertical axis should be set to whole number units since discrete observations are being tallied. This is done in the “format axis” menu after right-clicking on the vertical axis (set fixed major unit to an appropriate integer value). (Figure 8).

Figure 8. Changing number formatting on vertical axis



- 4) In the “format data series” menu, the “Gap Width” (under “Series Options”) slider can be moved all the way to the left, as histograms usually have very little space between columns (see Figure 9).

Figure 9. Changing gap width between columns





KNOWLEDGE SOURCES

Below are upcoming conferences for professional growth and development.

October 6-9, 2013: INFORMS 2013 Annual Meeting – Minneapolis, MN

<http://meetings.informs.org/minneapolis2013/index.html>

October 28-31, 2013: Health Policy Orientation – Washington, D.C.

<http://www.academyhealth.org/Events/>

November 2-6, 2013: American Public Health Association Annual Meeting and Exposition – Boston, MA

<http://www.apha.org/meetings/AnnualMeeting/>

February 3-4, 2014: National Health Policy Conference – Washington, D.C.

<http://www.academyhealth.org/Events/>

February 23-27, 2014: HIMSS 14: Annual Conference & Exhibition – Oakland, CA

<http://www.himssconference.org/>

March 13-17, 2014: Uniformed Services Academy of Family Physicians Annual Meeting – Crystal City, VA

<http://www.usafp.org/annual-meeting/2014-2/>

March 17-19, 2014: The Fourteenth Population Health and Care Coordination Colloquium – Philadelphia, PA

<http://www.populationhealthcolloquium.com/>

IN THE NEXT ISSUE

The next issue of *Healthcare Analytics in Navy Medicine* will focus on the new MHS Risk Adjustment Model. Risk adjustment factors can be used to adjust for differences between two populations when comparing healthcare costs and utilization. The next issue will highlight the structure of the MHS model, its potential uses, and the upcoming availability of risk score information in MHS data sources.

Editor:

Robert D. Willis

Managing Editors:

C. Allison Russo, Dr.P.H.
John Montgomery, Ph.D.

Presentation Designer:

Deborah Finette

Contributors:

LT Joseph Carey, Col Chad Martin,
Veronika Badurova, Geof Hileman,
Casey Kangas, and Allison Russo

**Deputy Chief for Resource
Management/Comptroller,
Bureau of Medicine and Surgery**
Joseph B. Marshall, Jr.

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